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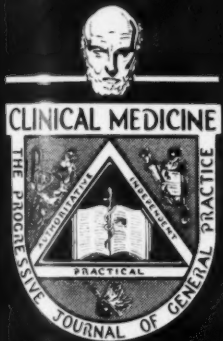
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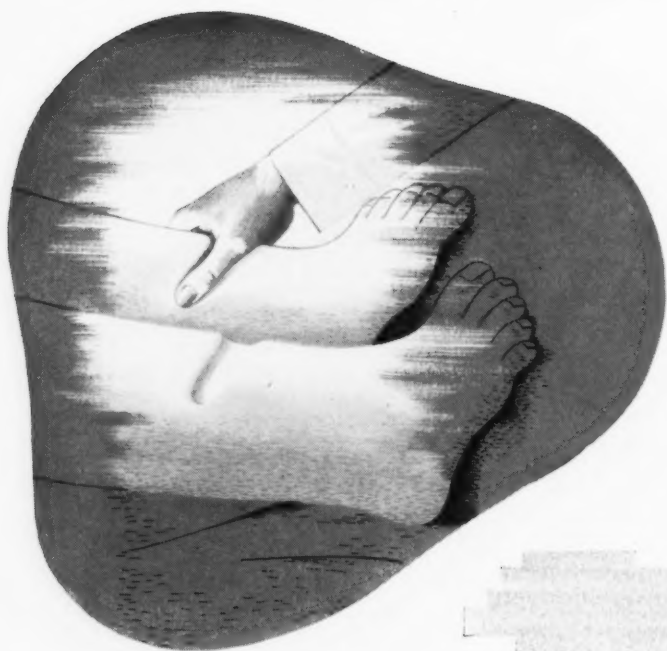
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VOLUME 48

NUMBER 6





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\*Archives of Pediatrics—56:Nov., 1939  
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BARON JEAN-NICHOLAS CORVISART

Volume 48 \* Number 6

J U N E , 1 9 4 1



## Clinical Medicine

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## ★ Editorial ★

### Corvisart

#### Pioneer in Symptomatology

A NUMBER of medical men have almost become world-famous for some great invention, by laying the foundations on which someone else built the showy superstructure. It was thus with Corvisart, who had the beginnings of the idea of auscultation, which his pupil, Laennec, brought to completion, but who is now remembered chiefly (if at all, by most physicians) as the man who revived and popularized Auenbrugger's important work on percussion, which had been neglected by his contemporaries.

Corvisart, who was Napoleon's favorite physician, was born in 1755, and was a true clinician, who became the leader of the French clinical school and a pioneer in general medicine, after the true Hippocratic tradition. His essay on "Organic Lesions of the Heart and Great Vessels" (1806) was the first important work on cardiology. He was the first to study the myocardium and the pericardium, and to recommend paracentesis in pericardial effusion. The two eponymic terms connected with his name are both in this field: "*Corvisart's Disease*" (chronic, hypertrophic myocarditis) and "*Corvisart's Facies*" (the appearance of a patient with cardiac insufficiency).

Moreover he was the father of the pathologic school, Boyle, Bretonneau, Dupuytren, and Cuvier, as well as Laennec, having been his pupils.

In 1795, Corvisart was made professor of medi-

cine in the School of Medicine, and two years later was promoted to the professorship in the College de France, but his most important lectures were given at the Neckar and Cochin Hospitals.

After the death of Dr. Barthez, in 1806, Corvisart became physician to Napoleon, who later made him a baron of the Empire, and lived to carry on his various important labors for fifteen years, passing to his rest in 1821, at the age of 66 years.

Here was a man whose truly epoch-making labors were eclipsed by those of his pupils, but deserve to be better remembered.

The free search for truth, its publication and defense, constitute the ultimate guaranties of culture.—DR. GEORGE SARTON.

#### A Profession in Danger

A FEDERAL jury, in Washington, D. C., recently convicted the American Medical Association of "criminal conspiracy in restraint of trade," but acquitted the officials of that organization and the other individual physicians concerned in the trial, thus presenting the anomaly of a conspiracy without conspirators; a crime without criminals; and unlawful restraint for which none was responsible. Moreover, the legality of the Code of Ethics of the

American medical profession was questioned, and other basic matters were involved.

Of course this case will be appealed, and carried to the highest courts, if necessary, but the fact remains that, if the *individual physicians* of this country do not care enough about their profession to *fight for it*, they will presently find themselves the virtual slaves of a horde of lay politicians who will exploit them to the limit and reduce them to the level of sycophantic members of a trade, to the vast detriment of everyone concerned (including your *patients*), except the *political exploiters*.

The only group that now gives promise of combating this dangerous tendency effectively is the National Physicians Committee (for the Extension of Medical Service), and our only hope for maintaining the high professional status which has made the health statistics of this country the envy of other nations is to give this Committee our hearty and unqualified support, financially and otherwise.

The secretary of your local or County Medical Society has received a confidential file of correspondence, showing how such support can be given most effectively. If this is not brought up, voluntarily, at the *next meeting* of your Society (which you should *be sure to attend*), ask that it be submitted for discussion and action, and then *co-operate*, to the full extent of your ability, in carrying out the program that may be adopted.

If you have not been receiving regularly the literature sent out by the Committee, *write to them, at once*,\* and ask for a copy of the brochure "Two Essentials for American Medicine," and when you have studied it, *tell your patients and friends about it and solicit their support*. If you have received this document, and have laid it aside unread, *read it, now*, and take such action as is worthy of your

\*Address The National Physicians Committee, Pittsfield Bldg., Chicago, Ill.

glorious profession and your honorable and necessary place in it.

There can be no compromise between self-indulgence and self-preservation.—ADMIRAL HAROLD R. STARK.

## Fireworks and Our Flag

IN THIS particular year it is especially and highly important that all of our citizens should do something, on the anniversary of the independence of this nation (symbolized by our flag), to remind them of that momentous event, cause them to

think deeply of the blessings it has brought them, and renew their determination not to surrender those advantages in response to the pleadings of those whose first interest is in some other country.

The traditional type of celebration, by setting off fireworks, is, however, puerile (because the military activities thus typified have enslaved far more people than they have liberated) and positively dangerous—sometimes even deadly.

Last Independence Day there were 4,462 cases of injury from fireworks, from 15 of which blindness resulted. Of these, 1,114 occurred in New York, where the control of the sale of these dangerous toys was

ineffective; while in Indiana, where such commerce is strictly regulated by law, there were only 2.

Let us encourage our legislators to limit or prohibit this unwholesome traffic (meanwhile warning our patients and friends of its hazards); and also let us suggest sane and constructive ways of celebrating this glorious holiday—ways that will impress the youngsters with the beauty and *practical worth* of the freedom they are commemorating, and will also leave a wholly joyous and stimulating memory, unclouded by the shadows of pain and maiming that fireworks are apt to leave behind.

### NEXT MONTH

Dr. R. L. Gorrell, of Clarion, Ia., will present the results of a careful study of the efficacy of a contraceptive jelly in women known to be fertile.

Dr. W. B. Palmer, of Furman, Ala., will outline and discuss the history of a family in which diabetes appeared in three generations.

### COMING SOON

"Causes of Cancer of the Rectum and Colon," by Charles J. Drueck, M.D., F.A.C.S., Chicago, Ill.

"The Cobra Strikes at Pain (Analgesia with Cobra Venom)," by Paul E. Craig, M.D., Coffeyville, Kans.

★ *Leading*



*Articles* ★

## Osteitis Deformans (Paget's Disease) with Maxillary Involvement\*

By

CHARLES C. VERSTANDIG, M.D., Ft. Devens, Mass.,  
Captain Medical Corps

C. B. SANDERS, M.D., F.A.C.P., and

HERBERT F. GILLARD, D.D.S., Houston, Texas

Paget's disease is not so rare as has been commonly supposed, and all clinicians should be on the lookout for such cases. This description by Dr. Verstandig and his associates should make the diagnosis easier.

PAGET'S disease, or osteitis deformans, is a disease of the skeleton, occurring usually in and after the middle years of life. The classical observations of Sir James Paget<sup>1</sup> have been confirmed and extended by the various investigators. The etiologic factors of the disease are in part questionable, but syphilis, arteriosclerosis, endocrine disorders, trauma, and gout have been mentioned as some of the causes.

Rast and Weber<sup>2</sup> have reported a familial tendency, where three sisters suffered from typical Paget's disease. Kasabach and Gutman<sup>3</sup>, in a series of 15 cases of osteoporosis circumscripta of the skull (considered by them as early Paget's disease), found two of these patients to be brothers.

Schmorl<sup>4</sup>, in an analysis of a series of 138 cases brought to autopsy, found that the locations of the lesions were as follows:

Part affected	Percent
Sacrum .....	56
Spine .....	50
Right femur .....	31
Cranium .....	28
Sternum .....	23
Os innominatum .....	21
Left femur .....	15
Clavicle .....	13
Tibia .....	8
Ribs .....	7
Humerus .....	2

Although he makes no mention of involvement of the jaws, it is highly probable that the maxilla and the mandible are much more frequently concerned than is commonly believed. Ralph Pemberton considers the skull as the most commonly affected site of Paget's disease.

It is generally stated that the disease is rather uncommon, but recent investigation shows that this is not true. Since the increase in the use of roentgenograms in the study of pain in the various parts of the body, and with the increase in familiarity

with its roentgenographic appearance, it is evident that osteitis deformans is much more frequently encountered than was formerly supposed. It is highly probable, due to the fact that the maxillae and mandible are not included in many roentgenograms of the skull, that so few cases of Paget's disease of the jaw are seen and diagnosed.

Paget's disease may involve the entire bone or be limited to only a portion of it, but when seen in the disseminated form, may involve all the bones. According to Stafne and Austin<sup>5</sup>, "The disease may have its origin in one bone, involving others in its progress. . . . The primary site may be the maxilla."

In the oral manifestations of osteitis deformans, enlargements of the maxillae have been seen where all of the maxillary teeth became telescoped over the lower teeth when the mouth was closed. In such cases, wherein casts were made, it was noted that the deformity was marked by an increase in the size of the maxillary arch so that the mandible was almost entirely hidden<sup>6</sup>.

One of the valuable aids in the diagnosis of osteitis deformans is the study of the blood serum content of calcium, phosphorus, and phosphatase. Biochemical research has provided a means of obtaining corroborating evidence in diagnosis through Kay's<sup>7</sup> discovery of the increased blood phosphatase activity in Paget's disease. The normal values for calcium are from 9 to 11 milligrams per hundred cubic centimeters; for phosphorus, from 2.5 to 3.5 mg. percent; and for phosphatase, expressed in Bodansky<sup>8</sup> units, from 1 to 5 units per hundred cubic centimeters of serum. In osteitis deformans, the calcium and phosphorus remain normal, but the phosphatase values are as high as from 30 to 40 units.

Gutman<sup>9</sup> made a study and blood analysis of 76 cases of Paget's disease, including instances of stages of the disease varying from the earliest demonstrable changes in the bone to the most widespread skeletal involvement. He found, in his series, that the normal serum calcium range of from 9 to 11 mg. percent was present in 65 of the 76 cases, or 85.5%. The serum inorganic phosphorus values were within normal range for the method he employed, except for 6 cases in which the values were above 4 mg., and these were associated with a high non-protein nitrogen content of the serum. In 75 of Gutman's 76 cases of Paget's disease, he found the serum phosphatase to exceed the normal value of 4 Bodansky units. The case which did not show a serum phosphatase increase showed a value of 1.8 Bodansky units, and in this

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Fig. 1: Profile view of the patient, showing the extent of the maxillary tumor.

case the involvement of the bone was least extensive (the ischium on the right side) and asymptomatic.

From this series one can deduce that the level for the serum phosphatase is roughly proportional to the extent of bony involvement and probably is also affected by the activity of the osseous lesions. In the advanced cases the serum phosphatase value may be forty or more times the mean normal value.

One must bear in mind that the serum phosphatase determination, in Bodansky units, is not specific, nor is it pathognomonic of Paget's disease, since the serum phosphatase activity is also increased in cases of osteoplastic metastases in bone. The phosphatase content of the serum should be used only as an adjunct in the diagnosis of this disease. Furthermore, when the osteitis is limited to one small region, as in early involvement of the maxilla or other bones, it is possible that the concentration of the phosphatase in the serum would not necessarily be appreciably raised.

Roentgenographic features in Paget's disease are probably chiefly dependent on the stage of activity of the condition. Since we are not concerned, in this paper, with the findings in the long bones, we will confine our description to the cranial findings.

In the earliest stages, the dominant feature is the osteoporosis. The skull changes reveal an increase in thickness of the vault of the skull, which is spongy and blotchy in appearance, with blurring of the outline of the tabula interna and externa. In addition, there are frequently several dense, circumscribed, oval or circular areas of increased density, which are almost pathognomonic of the disease (the "cotton-wool" effect), and which represent circumscribed sclerosis in a thickened, porous skull, the most frequent site being in the

parietals, but usually extending into the frontal and occipital bones.

Kasabach and Gutman<sup>3</sup> found that the lesions of osteitis deformans develop anywhere from two to eight years later in the region of the osteoporosis, in those cases which presented evidence of osteoporosis circumscripta of the calvarium. They are of the opinion that the circumscribed osteoporosis preceded the Paget's disease in advanced stages. In their series of 47 cases, they found bony tumors of the maxilla in 7 cases, or 14.9 percent. The site of the osteoporosis was the frontal region, and in the advanced cases the dense osteosclerosis showed a mottled appearance.

Pathologic findings reveal that the disease affects the long bones of the lower extremities and the bones of the calvarium most frequently. The osseous structures become markedly thickened and soft, and the weight-bearing structures become bowed. Following these changes, one notes the production of poorly-calcified bone, which, after many years, presents an ivory-like density.



Fig. 2: Lateral roentgenogram, showing bone involvement and "cotton-wool" appearance.

The skull shows evidence of extreme and marked thickening; the tabula interna is dense and the externa porous, which roentgenologically presents a fuzzy, "cotton-wool" effect. Over the vertex one may find the nodular deposits of bone rather irregularly distributed. The formation of the fibrous, soft bone tissue replaces the marrow cavity, which sometimes takes on a trabeculated appearance.

Packard, Steele, and Kirkbride<sup>4</sup> described the pathologic process as follows: "(1) Absorption of the compact substance, causing enlargement and confluence of the haversian canals; (2) formation of new bone, which runs diffusely through the affected and adjacent healthy portions, remains uncalcified, and is, in turn, resorbed; (3) the conversion of the medullary substance into a vascular connective tissue containing fat cells, giant cells, and leukocytes. In a small proportion of cases cysts filled with gelatinous material and giant-celled sarcomas occur in the medulla; (4) as a consequence of these three processes, the ordinary relations of the compact substance and medulla are destroyed and the bones become greatly thickened and asymmetrical; but



since the new bone tissue remains uncalcified, the elasticity permits great deformity of the long bones from weight of the body, and fractures do not occur."

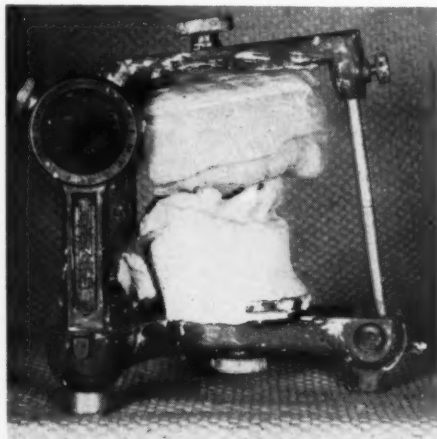


Fig. 3: Dental casts, showing telescoping of the maxilla over the mandible.

### Case Report

S. G., a colored female, age 65 years, was first seen on the colored out-patient department of the surgical service of the City Hospital, on September 5, 1939. At that time she complained of a "sore mouth", and gave a past history of enlargement of the upper gums, dating back ten years. The gums gradually became larger and more painful, the diagnosis of "epulis" was made, and the patient was referred to the x-ray department for diagnosis and treatment (See Fig. 1). On September 25, a diagnosis of "Malignant disease of the upper jaw" was made and the patient referred to the Chief of Neoplastic Surgery. The roentgenogram impression was not definite at this time and the patient was requested to return for further study. When this was done, the roentgenograms were sent to one of us (C.C.V.) by Dr. Gillard, for interpretation.

The left lateral view of the skull (Fig. 2) revealed an extensive blotchy and spongy-appearing calvarium, with marked increase in thickness and blurring between the tabula interna and externa. Many circumscribed oval and circular areas of increased density (the so-called "spherical islets" found in osteitis deformans) were also seen. Most of the changes were more or less limited to the parietal, frontal, malar, zygomatic, and maxillary areas. The malar and zygomatic areas presented a somewhat fibrosing osteitis effect, or hyperostosis. The appearance of the superior maxilla was almost that usually seen in osteoplastic metastasis from prostatic carcinoma, but such roentgenograms usually show a fine, spongy increase in density, with loss of old bony markings and an increase in thickness of the deformity. At this time we advised roentgenograms of the

pelvis and long bones, since it is usually found that similar changes are evident in them and in the pelvis.

On November 5, 1939, the patient was admitted to the Surgical Service. The hospital record did not throw any more light on the present or past history, but a note was made that the patient had a similar complaint of swelling of the upper jaw 25 years ago, for which she had all of her upper teeth extracted, after which the tumor mass disappeared. The physical examination revealed an enlargement of the right superior maxillary region measuring 8.5 x 4 centimeters. The mass was firm and somewhat painful to touch. No other changes were noted except arteriosclerotic hypertension (230/120). On November 15, 1939, the patient was sent to the x-ray department for roentgenograms of the long bones, but no changes were found.

On November 20, the patient was taken to the operating room and, under ethylene anesthesia, a section was made from the involved maxilla. The gross appearance of the specimen was described as "friable, honeycombed in appearance, and the maxilla was elongated anteriorly." The mucous membrane was closed with plain catgut and the patient returned to the ward. The pathologist's report of this section was: "Osteosclerosis, with foci of chronic granulation tissue, etiology unknown." The patient was discharged on November 22, to return to the out-patient department.

Oral (dental) roentgenograms were made by one of us (H.F.G.), and revealed an increased blotchy and "cotton-wool" effect throughout the entire superior maxilla. The circumscribed and oval areas of increased density, or "spherical islets," were distinctly pronounced throughout the upper jaw. Flat plates of the pelvis showed the same characteristics of the disease previously described. Casts of the upper and lower jaws (Fig. 3) showed the typical telescoping effect seen in osteitis deformans involving the maxilla.

### Laboratory Findings

**Urine analysis:** Specific gravity, 1.014; reaction, alkaline to litmus; albumin, 3 plus; sugar (quantitative and qualitative), negative; *microscopic*, leukocytes, 4 or 5 per high-power field; epithelial cells, 2 plus; casts, mucous, 1 plus, and an occasional coarsely granular cast.

**Blood:** Hemoglobin (Sahli) 58 percent; red cells, 3,250,000 per cu. mm.; leukocytes, 6,800 per cu. mm.; differential, polymorphonuclears, 72 percent; lymphocytes, 26 percent; monocytes, 2 percent. Kahn and Kline tests were both negative.

**Blood Chemistry** (in milligrams percent): Cholesterol, 250; calcium 8.9; phosphorus, 3.8; phosphatase, 16.8 *Bodansky units* (see Chart I).

**Pathologist's Report:** The microscopic examination of the sections, as described by Dr. Sanders, was as follows: "Resorption of bone is extensive, with widening of the lacunae and haversian canals. These spaces are filled with fibrous tissue. Small pieces of bone are surrounded by extensive fibrous tissue, in which there are numerous masses of mononuclear cells. Nuclei of stromal cells are few and hyaline degeneration of the stroma is extensive. Fibrosis of the marrow cavity is extensive. There are

CHART I

<i>Paget's Disease</i> BLOOD CHEMISTRY		
	NORMAL	THIS CASE
CHOLESTEROL	140-170 mgm.	250 mgm.
CALCIUM	9-11 mgm.	8.9 mgm.
PHOSPHORUS	4-6 mgm.	3.8 mgm.
PHOSPHATASE	1.5-4 Units	16.8 Units

many dark-staining round and spindle cells, which have the appearance of sarcoma cells. In many of these groups there are large, rounded or irregularly shaped giant cells, which closely resemble those found in epulis and in benign giant-cell sarcoma. A small amount of brown pigment was found in the stroma of these groups of cells. Degeneration and necrosis are extensive in some areas. There are a moderate number of new-formed capillary blood vessels in the stroma.

*Diagnosis:* Paget's disease of bone.\*

It is interesting to note the close similarity of the description of Dr. Sanders to that of Packard, Steele, and Kirkbride<sup>10</sup>.

#### Summary:

We have attempted to show the necessity for close correlation of the clinical and roentgenologic findings in a case of osteitis deformans with maxillary involvement.

In our case, we found the blood serum values to be definitely in line with those reported by Gutman,<sup>9</sup> in his review of 76 cases, the striking feature being the high serum phosphatase content (16.8 Bodansky units), while the serum calcium and serum phosphorus values remained within normal limits.

The telescoping of the maxilla over the mandible was distinct and obvious in this case, as shown by Figure 3.

In conclusion, we feel that roentgenograms are still of primary importance in the diagnosis of osteitis deformans.

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Station Hospital  
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## Rapid Breast Changes from Stilboestrol\*

In a Woman with Complete Uterine Aplasia

By

ABNER I. WEISMAN, M.D., New York City

Sexual underdevelopment, both primary and secondary, is by no means uncommon in both sexes, though such extreme cases as those reported by Dr. Weisman are rare. His suggestions for the correction of such conditions are clear and timely.

IN 1938, Dodds *et al'* succeeded in synthesizing a new chemical substance, not related structurally to estrone, but markedly estrogenic in action, which is, chemically, dihydroxy-diethyl stilbene, and is commonly known as stilboestrol.

Since 1938, stilboestrol has been widely used in Europe and throughout the British Empire, as substitution therapy wherever there is a deficiency of the estrogenic hormones in the body. It is from 5 to 10 times as potent as estrone and is efficacious when administered orally. Its cost is but a fraction of that of the usual commercial estrogenic substances.

British investigators have found the drug to be non-toxic and non-irritating. Some patients oc-

asionally experience nausea or some slight gastric upset, but the side reactions are minimal and gradually disappear with its continued use. Stilboestrol is widely accepted abroad and is hailed as one of the most valuable adjuncts to the armamentarium of the medical profession.

In this country, the first reports of the use of stilboestrol were rather disparaging, owing to the large percentage of patients who experienced side reactions, such as nausea, severe vomiting, abdominal distress, etc. I have treated more than 60 patients with this drug, and in only one instance was it necessary to discontinue it because of the severity of the side reactions.

Recently Davis published an encouraging report on the use of stilboestrol,<sup>1</sup> and intimated its tremendous clinical possibilities. Among its uses, he reported interesting results with two cases of primary amenorrhea due to hypofunctioning ovaries. Both of these women began to assume more distinct female secondary sexual characteristics, such as growth of pubic hair, development of the external genitalia, and increase in the size of the breasts and nipples, with pigmentation of the linea abdominalis, the nipples, and the areolae.

\*Read before the Clinical Society of the Jewish Memorial Hospital, November 14, 1939.



Fig. 1 (Left):—Before starting treatment. The nipples are absent and the areolae are scarcely pigmented.

Fig. 2 (Right):—After one year of treatment with commercial estrogenic hormones.

The marked increase in the size of the breasts and nipples, and the hyper-pigmentation of the nipples and areolae, were so striking and so similar to the reactions which I obtained in the case about to be described, that confirmation of this rapid effect of stilboestrol upon underdeveloped breasts should be reported.

### Case Report

This patient was first seen in June, 1938, and was reported, as an interesting case of complete, congenital absence of the uterus, in 1939<sup>1</sup>.

Mrs. G. R. was a housewife, 29 years old, of American descent, whose chief complaints were total amenorrhea and vague low abdominal pain.

Vaginal examination revealed a moderate-sized vaginal orifice, but the cervix and uterus were absent. This was verified by transabdominal pneumoperitoneum, followed by x-ray interpretation.

Besides her congenital pelvic anomaly, her stature was juvenile, and her pubic and axillary hair was absent. Her breasts were small and lacked glandular consistency, while her nipples were entirely absent and her areolae were scarcely visible. (See Fig. 1). At that time the diagnosis of ovarian hypofunction was made, and estrogenic hormones were prescribed, as pure substitution therapy. The patient had married at the age of 20 years, even though she had no libido, and it was chiefly to arouse this reaction and to aid in the development of her secondary sexual characteristics that hormone therapy was employed.

The results of almost continuous treatment with commercial estrogenic substances, over a period of one year, were recently reported<sup>2</sup>. After this treatment, giving from 2,000 to 10,000 rat units (10,000 to 50,000 international units) of estrogenic hormone weekly, her breasts had unquestionably increased in size, her nipples had become clearly defined, and the areolar pigmentation was characteristically increased. (See Fig. 2). These results would have been considered satisfactory, if stilboestrol had not been available; but since learning of the rapid action of this drug on breast growth, the changes which resulted from ordinary hormone therapy were not startling, in view of the fact that treatment had to be prolonged over the period of a whole year.

The following report on the results obtained with stilboestrol is undoubtedly more favorable:

**Stilboestrol Therapy:** During the summer of 1939, the patient was given a rest of four months,

following the estrogenic hormone therapy. During that interval, I visited the British clinics and noted the excellent results obtained with stilboestrol, whenever estrogens were needed.

In October, 1939, stilboestrol was obtained, in this country,<sup>3</sup> for clinical study, and the patient was immediately given one oral tablet of 5 mg. of that drug daily.

During the rest period there had been some slight regression of pigmentation, but the size of the nipples had not changed. After taking the first tablet or two, the patient experienced some nausea, but subsequently all the side reaction subsided in a few days with the continued use of the tablets.

At the end of the first week of treatment, there was a definite increase in size of the nipples, and pigmentation of the areolae had become more pronounced.

At the end of three weeks, stilboestrol therapy had to be discontinued, because the breasts were tender and painful and had become full, hard, and massive. The nipples were large and black, while the areolae were heavily pigmented (Figs. 3 & 4). From all appearances, these breasts simulated those found in pregnant women at the end of pregnancy, when the estrogenic hormone output is at its height. The lack of actual secretion demonstrated that the effect was a pure estrin action.

Within 3 or 4 days after stopping the stilboestrol, the pain and tenderness were gone, and treatment was again begun, but from then on the dose was varied: At times she was given 5 mg. every other day; then 2 mg. daily; and for short periods of time 5 mg. every day. With continued treatment, it was noted that pubic hair had commenced to grow, but there was no appreciable increase in the size of the breasts or nipples, over what had been accomplished during the first three weeks of treatment.

The stilboestrol medication was continued for five months, during which frequent, short rest periods, without medication, were included. The patient received 465 mg. of stilboestrol, in all. At

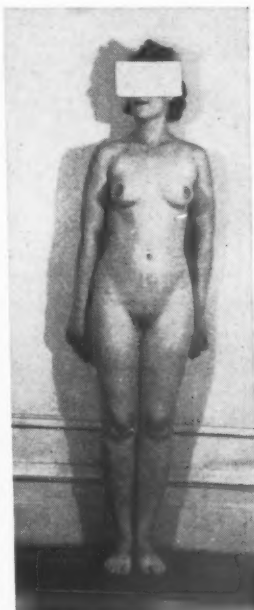


Fig. 3:—After three weeks of treatment with 5 mg. of stilboestrol, orally, administered in daily doses. Note increase in breasts, nipples, and areolae; also the absence of pubic hair and the slight tendency toward a male configuration.

<sup>1</sup>Since this paper was presented, the patient was operated upon for chronic, right-side abdominal pain. An appendectomy was performed and an exploration of the pelvis revealed the absence of a uterus and an anomalous condition, which will be subsequently reported in the literature. Both gonads were absolutely non-functional, with absence of follicles and marked atrophy.

<sup>2</sup>I am grateful to Winthrop Chemical Co.; Endo Products, Inc.; Ayerst, McKenna and Harrison, Ltd.; and E. R. Squibb and Sons, for supplies of stilboestrol.



Fig. 4:—Same as Fig. 3: a close-up view of the breasts.

the termination of the 5-month period, blood studies were made, and no toxic manifestations of any kind were detectable. Moreover, the patient felt well and looked better than ever before. Her libido and the sensitiveness of her erectile tissues were definitely increased.

#### Action of the Estrogens on the Breasts

The action of stilboestrol in stimulating mammary gland activity is to be expected. As far back as 1927, Allen<sup>5</sup> discovered that estrus-producing substances could initiate, in monkeys, an extensive growth of the mammae, which was chiefly a proliferation of the duct system.

Among the first clinicians to demonstrate the action of estrogens on breast growth were Werner and Collier<sup>6</sup>, who treated 13 ovariectomized girls with estrogenic hormones and reported the occurrence of marked activity of the breasts, characterized by fullness and enlargement, together with development of the duct system, erection and tingling of the nipples, and tenderness of the nipples and gland branches. A number of clinicians have since used the estrogenic hormones for treating breast hypoplasia, and excellent results have been reported following the use of potent preparations.

Stilboestrol is a definite estrogenic substance and acts as do the hormones. The one difference is that this drug is much more rapidly acting and more potent when administered by mouth.

The generally accepted theory, in connection with lactation, is that the estrogens initiate the development of the breasts to the mature, non-lactating state, while both the estrogenic and luteal substances are necessary to prepare the glands for the action of the lactation-producing hormone of the anterior pituitary gland.

Breast pigmentation produced by stilboestrol is characteristic of the deposition of pigment found in pregnancy, when the elaboration of estrogenic hormone in the body begins to accelerate, and increases to enormous amounts as pregnancy advances. The pigmentary effect, in both these instances, is probably an estrogenic effect.

#### Conclusions

This case of primary ovarian hypofunction, with congenital aplasia of the uterus, is an ideal one for the study of stilboestrol activity. The breast changes, which took place in a year, with frequent, expensive injections of commercial estrogenic hormones, were vastly more pronounced after but three weeks of stilboestrol therapy.

The rapid physiologic effect of the daily 5 mg. tablet of stilboestrol, given by mouth, produced growth of the breasts and nipples to such an extent that the mammae simulated those of a pregnant woman. This stimulation was accompanied by some slight nausea for the first day or two, which was scarcely noticed by the patient.

Continued treatment with stilboestrol, over a period of 5 months, with a total intake of 465 mg. of the substance, was attended with no toxic symptoms or physical findings.

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#### FREE ENTERPRISE

*The fact is, capital helps labor, for the best paid labor is found side by side with the highest investment in tools, per worker. Poor tools mean cheap labor, as in China. In America, \$6,000 in tools and plant, per man, on the average prevails in our factories. The man, therefore, who saves the \$6,000 becomes the known friend of the worker, or his son who is looking forward for a job. That is what our free enterprise system is all about.*—SAMUEL B. PETTENGILL.

#### CIVILIZATION

*To be civilized is to be incapable of giving unnecessary offense, to have some quality of consideration for all who cross our path.*—AGNES REPPLIER, in "Americans and Others."

# Edema\*

By

WM. A. THOMAS, M.D., Chicago, Ill.

Assistant Professor of Clinical Medicine, Rush Medical College

Edema is a symptom frequently encountered by practically all active clinicians, but relatively few of them fully understand its physiologic background, which is made helpfully and practically clear by Dr. Thomas, in this article.

*solution results in edema.* Either 5-percent dextrose in distilled water, or Hartmann's solution (now available in sterilized flasks, ready for use—Ed.) should be given, intravenously, as an alternate to the use of saline solutions or to relieve edema from such a cause.

**N**O KIDNEY is so badly damaged that it cannot excrete water, even though the ability to concentrate and dilute is lost. A badly damaged kidney can not excrete urine of a higher specific gravity than that of blood serum (1.010). The Mosenthal test of concentration is the most accurate and reliable test of kidney function for early diagnosis of renal damage, and persists after such other tests as the blood urea and phenolphthalein excretion have returned to normal.

There are two types of edema: Water in the interstitial spaces, producing pitting edema; and water in the cells producing "tissue thirst." Pitting edema usually occurs following cardiac decompensation or low protein intake, both of which decrease the osmotic pressure of the extracellular fluid.

Intracellular edema is a sodium-potassium disturbance, causing an increased water content of the cells ("tissue thirst"). The skin absorption test is of diagnostic value. Sterile physiologic saline solution, 0.2 cc., is injected intradermally (as a tuberculin or Schick test is made) and watched at intervals. The normal time required for its absorption is 60 minutes. If the edema is increasing the absorption time is shortened (just the reverse of what would be expected). An edematous leg, for example, will absorb the saline solution readily and quickly (in 10 minutes); in nephrosis, the absorption time is very fast. *This test indicates that edema is impending or subsiding*, and will often foretell the appearance of edema long before any clinical manifestations are present. The administration of fluids should be considered carefully, if the absorption time is shortened; if it is lengthening (which occurs even before diuresis appears), fluids can then be given.

## Electrolytes

Calcium and sodium are always in the same proportion in the normal blood. If too much calcium is given, the body cells are "frozen," become less permeable to electrolytes, and lose much water, which is discharged into the interstitial tissue spaces, the cell becoming smaller. Give calcium, when cells are swollen, as a diuretic.

Too much sodium results in swollen cells and increased permeability. The occurrence of too large amounts of either calcium or sodium (unless they have been given by the physician) is rare. Chlorides are not important, but 95 percent of the sodium is bound up with chlorides, and it is easier to test for chlorides, so that this test is usually relied upon to determine the amount of sodium in the blood.

*The administration of large amounts of saline*

\*Presented before the Humboldt County Medical Society Postgraduate Course, at Humboldt, Iowa, Sept. 26, 1940. Reported by R. L. G.

## Clinical Phases

*Should fluids be given or restricted?* Fluids may be given freely in cases of edema if they contain calcium (as do Hartmann's, Ringer's and Locke's solutions) and sodium. In nephrosis, fluids containing sodium alone are ineffective, as the sodium soon passes out into the tissue spaces and causes increased edema, because the damaged kidney cannot excrete the sodium. Preference should be given to the use of hypertonic solutions (such as from 10 to 25-percent dextrose solution), or of potassium- or calcium-containing fluids.

*Most oliguria is not due to renal failure.* Postoperative oliguria or anuria may be due to dehydration (no free water is available). The skin absorption test of Aldrich, previously described, shows a time of 5 minutes, instead of 60 minutes.

The best fluids to use during the postoperative period or in treatment of actual edema are 6-percent dextrose or Hartmann's (Ringer's) solution which will enable the patient to maintain body weight during and after operation.

If edema is present, 30 grains of calcium chloride may be given every hour for 4 hours, if too much sodium is present in the tissues.

Dehydration, as in cases of diarrhea, is due to the loss of fluids. An infection injures the cells, so that water is lost and causes diarrhea and diuresis, because the cells cannot hold water. The skin absorption test, in these cases, may still show fluid present at the end of 5 hours. Sodium chloride solutions should be given, or sodium chloride and hydrochloric acid may be given through a stomach tube, thus permitting the cells to obtain sodium and go back to their normal size.

I believe that the restriction of proteins in these cases is one of the most harmful bits of advice ever given by physicians. Protein foods are necessary to maintain nitrogen equilibrium, to the extent of 0.5 to 1 gram per Kg. of body weight actual protein daily, not the weight of meat or eggs. In moderate albuminuria, the patient loses from 10 to 15 grams of protein each day.

*Much animal protein is needed*, not only to make up the protein deficit, but also to compensate for the daily loss. *There is no evidence that protein affects blood pressure adversely nor causes increased albuminuria.*

If more protein than is necessary is given, there may be a temporary increase of albumin in the urine, but there is also increased retention in the body. As the serum proteins build up, the albuminuria tends to decrease. Some nephrotic patients respond well if more protein is given than they are losing.

## Menstrual Edema

The average woman gains from 2 to 2½ pounds



at each menstruation, and loses this weight within a few days. During this period, the skin absorption time is shortened and there is a decreased urinary output. If the woman has an infection or is fatigued, 3 or 4 pounds may be gained and lost. Little is known as to the cause of this phenomenon.

I have reported two cases of definite menstrual edema, in both of which, during the four days preceding the onset of menstruation, there was a sharp increase in weight, followed by anuria, anasarca, choked disc, and convulsions (apparently due to edema of the brain). After menstruation had ceased, diuresis would appear and all the symptoms would disappear.

The use of calcium or potassium chloride or non-soda-containing alkalies results in much less edema. Intracellular edema may be due to thyroid deficiency.

#### The Albumin-Globulin Ratio

The normal ratio between albumin and globulin in the blood is:

Albumin	4.5	2 or 3
Globulin	3	1
	Albumin	1

In nephrosis, the ratio often is:

	Globulin	1
--	----------	---

Albumin exerts the greater osmotic pressure, as it is made up of very small molecules. Edema may appear when much albumin has been lost but the total proteins are still normal. The damaged capillary walls, in decompensated heart disease, permit the passage of protein out into the tissue spaces (proteins, normally, are always retained inside the vessel walls), and the result is edema.

#### Treatment of Edema

First, find the cause of the edema. Direct treatment is needed only if it does harm (localized pressure or discomfort). In heart disease, proper treatment of the heart is the first essential. In nephrosis, the protein intake must be increased.

There may be a deficiency of vitamin B<sub>1</sub> (thiamin). A woman of 35 years, who had been on a restricted diet for a year, complained of edema of the feet at night, palpitation, fatigue, and loss of weight. Large doses of vitamin B<sub>1</sub> resulted in marked improvement in this beri-beri type of case.

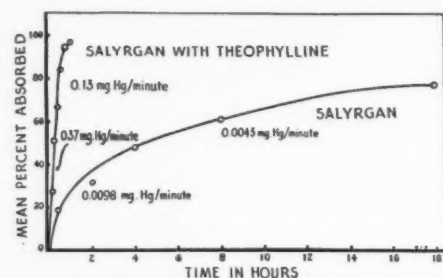
There may be a deficiency of protein foods, especially of animal protein, which must be corrected.

In heart disease, fluids should be restricted to 1,500 cc. (1½ quarts) per day, if the specific gravity of the urine reaches 1.015; if 1.020 can be reached, the fluid intake may be cut down to 1,000 cc. (1 quart) daily. The reason for the insistence on sufficient volume and concentration of urine is that metabolites (waste products) will not be retained. Venesection may be carried out if the venous pressure is high. Digitalis and a low-salt diet (4 Gm. of salt, instead of the usual 18 Gm., daily intake) are essential in every case.

**Medicinal treatment:** The kidney factor in edema may be dealt with by increasing glomerular filtration or decreasing tubular reabsorption.

The xanthine group of drugs cause increased glomerular filtration. Aminophyllin is non-irritating and may be given in doses of 0.48 Gm. (7½ gr.) four times daily, intravenously, and in 6-grain (0.4 Gm.) doses four times daily by mouth. Theophylline-sodium acetate and theobromine-sodium salicylate (Diuretin) are effective. Theobromine-calcium salicylate (Theocalcin) is even better, because the calcium replaces sodium in the tissues and eliminates it.

Mercurials prevent tubular reabsorption. Salyrgan is a highly effective drug, if given after ammonium chloride or nitrate has been taken for 3 days, in from 6 to 8 Gm. doses, by mouth. One (1) cc. should be given as the first dose, to see if a reaction (rare) will appear. From then on, the dose is 2 cc. I do not believe that damage to the kidneys results from the drug's use, as I have had one patient who received 116 successive injections, at one-week intervals, without clinical or necropsy signs of pathologic change. Cardiac patients receive the most benefit; patients with nephritis are often helped; nephrotic individuals may be helped.



Courtesy Clinical Excerpta (Winthrop).

Fig. 1

Alkalies inhibit the action of Salyrgan; therefore the patient should be instructed not to take alkaline waters, ulcer powders, sodium bicarbonate, or soda pop. Test the urine with litmus paper, to make sure that it is acid, before giving an injection of Salyrgan and after the patient has used ammonium chloride for 3 days.

The combination of xanthine and mercurial drugs is a recent and effective development. Mercupurin (theophyllin and a mercurial resembling Salyrgan) and Salyrgan theophyllin are definitely successful in mechanically reducing edema.

All of these drugs can be given intravenously or by rectum (suppository), as can also theophyllin-sodium acetate. One suppository is used every fourth or fifth night.

**Substitute potassium for sodium:** Do not give sodium salicylate, but, if necessary, acetylsalicylic acid. Give potassium citrate or chloride, 5 Gm. daily, in enteric-coated pills, or powdered, as salt on food. Calcium and potassium are opposed to sodium in balancing the blood electrolytes.

#### Shock and Toxemia of Pregnancy

In acute shock, such as the postoperative type, and in severe toxemias of pregnancy, there may be a rapid onset of collapse and hypotension. Liver damage causes the blood to be thick, so that it will not run normally, and all substances it contains are increased (hemoglobin may be as high as 140 percent, and red cells as high as from 6 to 8 million, because of hemoconcentration).

**Crises in toxemia can be predicted** by using the skin absorption test, as described above, every few hours. When the absorption time shortens from 50 to 25 minutes, another crisis will occur shortly due to "tissue thirst." Hartmann's solution should be given at once.

When a crisis has developed or is impending, give 6-percent acacia solution or a blood transfusion. Do not give a watery solution (such as

physiologic saline solution) intravenously or by hypodermoclysis, as such fluids, when given into a vein, pass out into the tissues almost as fast as they are given; and when given under the skin will not be absorbed.

The osmotic pressure of the blood must be increased, and the only two agents that are effective are acacia solution (now available in ready-prepared flasks) and whole blood or blood plasma transfusions. Adrenal cortex extract should also be used, although insufficient clinical work has been done to evaluate it properly.

#### Acute Pulmonary and Hepatic Edema

The use of Salyrgan or aminophyllin, intraven-

ously, prevents nocturnal dyspnea. The effect is quick, even if no edema is perceptible. When acute pulmonary edema develops in a patient, the intravenous administration of aminophyllin and the subcutaneous administration of morphine give prompt relief.

The ascites of cirrhosis responds well to the acidifying routine with ammonium chloride, as described, followed by the use of Salyrgan. Abdominal paracentesis is needed only in the later stages. If cirrhosis is developing rapidly or if a hepatitis appears, the Mayo Clinic method of giving dextrose intravenously over a long period (steady infusion of 5-percent dextrose solution) is effective.

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## The Treatment of Gonorrhea

By

G. M. RUSSELL, M.D., Billings, Mont.

The specialist in venereal diseases has the facilities to individualize his treatments with great particularity, but the busy general clinician must have a more or less routine method that can be depended upon. Dr. Russell here offers one, based upon clinical research, that has served him well.

SINCE the publication in this Journal of my article on "Gonorrhea and its Chemotherapeutic Treatment",<sup>1</sup> I have had further experience in the treatment of this disease.

In the article mentioned I gave the results obtained from the use of S.U.M. 36\* and S.U.P. 36\*, followed by gonococcic vaccine. I have since then abandoned the use of the vaccines, as I finally was not getting as good results with them as I did during the first two years. I replaced the vaccine with intramuscular injections of boiled milk, but as I had a couple of nitritoid reactions from this, notwithstanding the fact that I was always careful to pull back on the piston of the syringe before the injection, I abandoned it and adopted the intravenous injection of typhoid-paratyphoid vaccine (beginning with 25 million organisms and giving two doses a week, in the evening, increasing by a like amount at each dose, up to 350 million), producing a chill and fever within one hour, and later I added to this the intramuscular injection of 2 cc. of 2-percent sulfur in oil, which produces a fever in seven hours, lasting from eighteen to forty-eight hours. About this time I abandoned the use of the S.U.M. and S.U.P. 36, as I found I was getting equally good results without them.

I then resorted to mechanically produced artificial fever, in rebellious cases, the result of which was rather problematic, inasmuch as most patients failed to return for a checkup, and the procedure is somewhat dangerous.

The combination of the typhoid-paratyphoid and sulfur in oil gave excellent results, the only objection being that some men did not have the stamina to go through with it.

\*Symmetrical ureas.

Then along came sulfanilamide, which was lauded to the skies, the first reports showing a cure in 90 percent of cases. In my experience I have been able to get such results in only about 10 percent. Pelouze<sup>2</sup> maintains that many cases treated with sulfanilamide, in which there is apparent cure, are not really cured and that they are symptomless gonococcus carriers.

In the *Military Surgeon* appeared an article by Chas. E. Verdier,<sup>3</sup> abstracted by CLINICAL MEDICINE AND SURGERY (Nov., 1938, page 541), in which he claimed that he had secured gonococcus-negative smears following intravenous injections of 1:500 hydrochloric acid, in acute cases, and a 1:1000 solution in subacute and chronic cases, without failure in a single instance. I have since been using this treatment, but have not seen as prompt results as he reported. However, I have been obtaining results by giving 10 cc. of a 1:500 solution (in chronic cases, a 1:1000 solution), intravenously, every day, and lately alternating it with intramuscular injections of Protein G,\* beginning with 0.1 cc., increasing by 0.1 cc. each time until 2.0 cc. are given, and continuing until there has been no discharge for two weeks.

After the discharge has stopped for two weeks I begin checking with smears and cultures, and make repeated examinations at intervals of three or four days, until I have examined the patient at least five or six times.

The second examination is made after the patient has taken some alcohol; the third, after an injection of 1-percent silver nitrate solution, held for one minute; the fourth, after passing a sound down to the cutoff muscle and massaging the urethra over the sound; the fifth, after a combination of liquor and sexual excitement. After that, I have the patient come in every two or three weeks, for at least four or five more examinations.

When sulfapyridine was released, equally brilliant reports were published. My experience with

\*A preparation, containing less than 0.5 percent of alcohol, derived from 21 varieties of seeds and plants, each cc. representing the extract of 7½ grains of the ingredients used. It is manufactured by the Medical Sales Co., Pittsburgh, Pa. While its use is more or less empiric, it has produced such good results, in some cases, that I feel justified in employing it.—G.M.R.



this drug is that, if the discharge stops within three days, it may be continued until the 12th day, after which I have been unable to find gonococci in any case, either in smear or in culture. If the discharge does not disappear within three days, I abandon it as absolutely useless in that case, and use the intravenous injections of hydrochloric acid, and Protein G.

In the use of sulfapyridine, one must watch the red blood-cell count and hemoglobin very carefully. I had one case in which the red-cell count dropped to between 2 and 3 million. My son, Dr. Leland Russell, gave this medication to one man who, within a few days, became unconscious. His wife, not knowing about the case, called another physician, who sent him to the hospital, where he remained in that condition for several days. On account of this I have been very careful in the administration of this drug.

More recently has come sulfathiazole, with which I have had some good results where sulfapyridine failed. Here, too, unless the discharge stops within three days, I stop giving it, because I can see that it is not going to do the work.

Pelouze<sup>2</sup> states that practically all of those who have studied the matter closely believe that, if these new chemotherapeutic agents really cure, they do so promptly. He who includes as sulfanilamide cures those patients whose disease has continued for 30, 60 or 90 days after the drug was started, is including many patients who would have reached a cure by themselves. He also includes a considerable group of patients in whom the drug has brought about a symptomless carrier state, and who therefore are a social menace.

The results Pelouze claims to obtain by urethral irrigations and injections of mild silver protein solutions held in with a clamp, are rather marvelous, when one considers that, by the time the discharge has started, the gonococci have infiltrated into the tissues from 2 to 8 or 10 millimeters, depending upon the virulence of the infection and resistance of the patient. It is difficult to see how these mild antiseptics can "stimulate the local tissues so that their curative efforts are stepped up" to such an extent as to reach gonococci 8 or 10 mm. below the surface.

In times gone by, with the use of irrigations and injections, the percentage of patients developing epididymitis was one out of 4 or 5, regardless of the care used in the amount of force applied when giving the treatment.

It is reasonable to suppose that a certain percentage of individuals have such weak cutoff muscles that irrigations and injections will pass into the posterior urethra, especially if the injection is retained for 5 or 10 minutes. It is also reasonable that what Pelouze says in regard to "symptomless carrier stage" may apply to cases treated in this manner.

In my experience I have known of no cases that "have reached a cure by themselves" in 30, 60, or 90 days.

Fraser and Dye<sup>4</sup> report a case, in a man 70 years of age who had had gonorrhea when he was 20 years old; was operated upon for prostatic hypertrophy; and immediately developed an acute gonorrheal urethritis, showing that the gonococci had remained latent in the tissues for 50 years. This emphasizes the fact, that this disease can be completely eradicated only through the blood stream, if such a thing is possible.

The results I have obtained from intravenous injections of 1:500 hydrochloric acid, and Protein G intramuscularly, have led me to believe that this is the ideal form of treatment, although I do treat the acute cases with sulfapyridine or sulfathiazole for three days first. Every patient I have treated with the acid and Protein has been rendered gonococcus-free on repeated examinations with smear and culture. In some instances I interpose an occasional typhoid-paratyphoid vaccine injection, which seems to shorten the time of treatment.

My treatment of gonorrheal pyosalpinx consists of the injection, through a tightly fitting catheter into the fundus of the uterus, of 2 cc. of a 1-percent solution of acriflavin, every day. The results have been good, and it is remarkable how quickly these cases can be cleaned up in this manner.

I have had no experience with the local use of hydrochloric acid solution in the treatment of this condition, though I have used a 1:200 solution for swabbing the cervical canal and the vagina, in trichomonas vaginitis, with excellent and prompt results.

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### THE HORROR OF WAR

*Think what must be the feeling of the mothers of the world as they look out on this scene. Many of them remember only too well what happened to their husbands and their sons twenty-five years ago. How many of them can face with equanimity what might, within twenty-four hours, begin to happen to the husbands and sons of today? What is the use of trade, what is the use of industry, what is the use of commerce, what is the use of effort, what is the use of trying to gain some return from all these in order to make mankind more comfortable, more fortunate, and better protected in old age and adversity? What is the use of it all? We are pouring out, not only the world's earnings, but the world's savings—savings for a thousand years—and those savings are not illimitable. There comes a time when they will have gone, and what will the world do then? What will happen?—NICHOLAS MURRAY BUTLER, in Think, May, 1939.*



## The Seminar

Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussions of any or all problems. Discussions should reach this office by the 5th of the month following the appearance of the problem. Send your problems and discussions to The Seminar Dept. care CLINICAL MEDICINE, Waukegan, Ill.

### Problem No. 4 (Surgical)

Presented by W. B. Palmer, M.D.,  
Furman, Ala.

(See CLIN. MED., Apr., 1941, p. 115)

**RECAPITULATION:** A woman, 60 years old, developed an enlarged left inguinal gland, but no others. There was no lesion on the left leg except a small, tender, black mole, on the thigh. The blood study gave no clue to the diagnosis.

A biopsy was made, followed by an operation, but the patient died within 90 days after she first noticed the swollen gland.

**Requirements:** Suggest a diagnosis, and any other mode of treatment you would have used.

Discussion by B. B. Parker, M.D.,  
Centerville, Ia.

The history and clinical findings, although decidedly incomplete, would indicate *malignant change in a congenital nevus*, with metastases already in the inguinal glands. The result of surgical treatment suggests secondary involvement beyond the inguinal area.

Radium treatment of the mole, earlier, probably was indicated and, at the time of operation, deep x-ray treatment to the inguinal and abdominal gland areas *might* have aided in prolonging the patient's life.

Discussion by L. E. Williams, M.D.,  
Kansas City, Mo.

The presence of an enlarged inguinal gland and a sensitive pigmented mole on the same side, in this sixty-year-old woman who had no other complaint, and the inability of the physician to find anything else to account for the inguinal adenopathy, lead me to suspect malignant disease.

Pigmented moles, situated in an area subject to chronic irritation, are likely to undergo malignant degeneration and metastasis, which may be through the bloodstream or the lymphatics. The secondary lesion or lesions may be larger than the primary one, and may be the first symptom noticed. Some pigmented moles have a tendency to metastasize before any changes are observed in the mole itself, as the history of this case seems to show. I am inclined to think that all pigmented moles, located in areas which are subject to constant irritation, should be *completely removed, surgically, before the individual reaches the cancer age.*

*Tentative diagnosis: Melanotic carcinoma or sarcoma, with metastases to the lymph glands and viscera.*

*Treatment:* Treatment is of little avail after

Discussion by F. J. Pritham, M.D.,  
Greenville Jet., Me.

My "guess" would be that the "black mole" was malignant and the enlarged inguinal node a metastasis through the lymph channels. Metastases were also probably found at the time of operation, and it was too late to remove all of the diseased tissues.

I remember seeing a similar case some 25 years ago, but cared for the patient only after she returned home to die. A mole had been removed, and very soon after, hundreds of hard nodules developed subcutaneously, all over the body. We gave Cooley's serum, but it did little good.

Discussion by R. L. Gorrell, M.D.,  
Clarion, Iowa

An enlarged inguinal lymph node may result from a lesion anywhere on the foot or leg, on the buttocks, anus, genitalia, or abdominal wall.

Swelling of the inguinal glands may be due to (1) infection; (2) metastasis from a malignant lesion; (3) tuberculous disease (Savill, in "A System of Clinical Medicine," William Wood and Company); (4) syphilis; (5) climatic bubo; (6) acute specific fevers; (7) leukemia; (8) Hodgkin's disease; (9) glandular fever; and (10) plague or trypanosomiasis. *The first three arise in glands adjacent to a focus, and the glandular swelling usually becomes localized; in the remainder all the lymphatic glands tend to become affected.*

Enlargement of glands due to infection may be recognized by the tender, painful nodes. Cancerous glands are hard and fixed to the tissues. Syphilitic glands are small, hard, shotty, painless, and perceptible only on palpation.

If careful study did not reveal any other cause for the enlarged node, one would diagnose a *melanocarcinoma arising from the mole*. This would be especially true if the mole had enlarged recently. Lee writes, "Early signs of malignant change are (1) a sudden increase in size, chiefly in elevation rather than in lateral spread; (2) an increase in pigmentation and depth of color, particularly if the color has taken on a bluish cast; (3) the development of very small, pigmented, pin-point areas in the skin immediately around the tumor; (4) a tendency for the pigmented area to bleed; or (5) inflammation, especially ulcerative, of the tumor.

MacKee and Cipollaro ("Cutaneous Cancer and Precancer," Published by the American Journal of Cancer, New York, 1937) classify the neoplasms that arise from pigment-forming tissues:

Benign	Malignant
Pigmented and non-pigmented nevi.	Nevocarcinoma.
Blue nevus of Tieche.	Nevosarcoma; melanosarcoma.
Mongolian spot.	Melanocarcinoma
Benign lentigo.	

All these neoplasms may be grouped under the heading of melanoma. When they develop in a nevus, they are called nevocarcinoma; when they arise from an acquired pigmented lesion, the designation is melanocarcinoma.

**Treatment:** When the lesion is local, it should be widely and deeply excised; the width of the bottom of the excised tissue should exceed that at the surface, to include strands of malignant cells extending downward and outward. Roentgen rays and radium are of some use after metastasis has occurred. I have seen one case which was cured by excision of the melanotic inguinal nodes and amputation of one-half of the foot.

#### Discussion by G. M. Russell, M.D., Billings, Mont.

This undoubtedly was a highly *malignant melanoma*, and the patient must have died of metastases. While no report is made of a microscopic examination of tissue removed, probably it was made, but without knowing the result of such an examination, one's diagnosis is, to a certain extent, a guess.

#### Discussion by A. E. McMahon, M.D., Glenwood City, Wis.

The presence of a small, sensitive, black mole on this patient's thigh, and the enlarged inguinal gland, would scarcely permit of any diagnosis except *malignant melanoma with metastases*. It is not stated what was done at operation, but presumably the leg was amputated high, possibly by disarticulation of the hip joint, with removal of the inguinal lymphatics. The death of the patient was due to metastases to one or more distant organs.

The treatment of malignant melanoma, to date, has been highly unsatisfactory, regardless of what procedures have been employed. Wide excision of the tumor, with a generous area of surrounding skin and underlying fascia, and removal of regional lymph nodes, is, I think, generally believed to be the treatment of choice. If the tumor is situated on an extremity, amputation, with removal of the regional lymph nodes, is probably the procedure most apt to arrest, or possibly to cure, the disease.

After lymph node metastases have occurred, even the most radical surgical procedures usually are of no avail, because, from the lymph nodes, a spread to distant organs soon takes place by way of the blood stream. Blood-stream metastasis, may, of course, occur from the primary growth, but the usual spread is through the lymphatics

to the regional lymph nodes, thence through the blood stream to other parts.

Malignant melanomas are unusually resistant to x-ray or radium therapy, although some men have reported good results, in early cases, by intensive radiation treatment in massive doses.

As in many other diseases, prevention is the most successful form of treatment for melanoma. Any pigmented mole, so situated as to be constantly subjected to even slight trauma, should be widely excised, or thoroughly destroyed by electro coagulation.

#### Solution by Dr. Palmer

The diagnosis, as reported at once from the laboratory, was "*Melanotic sarcoma; prognosis bad.*"

The seemingly harmless, sensitive black mole, two or three inches below the gland enlargement, was apparently the source of the sarcoma. What stunned all of us was the rapid development of the malignant growth.

### Problem No. 6 (Surgical)

Presented by August Helmbold, M.D.,  
Cincinnati, Ohio

A MARRIED woman, aged 34 years and the mother of 3 children, complained of back pain in the region of her right kidney. Her past history was irrelevant.

**Examination** revealed a well nourished woman who reported regular bowel movements and urination; no macroscopic blood in stool or urine; temperature, pulse, and blood count, normal; urine normal, except that it was alkaline (pH 7.5).

I gave her dilute nitrohydrochloric acid, 10 drops (0.65 cc.) in water, three times a day, and a high-protein, low-fruit and vegetable diet. She returned in three days, with the pain no better. Reexamination revealed no abdominal masses and the urine pH 7.0. I continued the treatment previously ordered.

One week later she returned, still in pain; urine pH 4.5; beginning to look ill; face pale; pulse 100; no fever; nervous. Examination now revealed a small mass in the right side of the abdomen, lateral to and a little lower than the usual gall-bladder location.

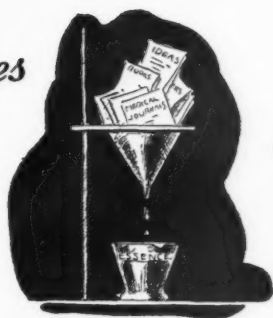
The patient was sent to the hospital and an intravenous urogram was made, which showed the right kidney enlarged and a partial blocking of the right ureter. The mass was not visualized and the left kidney and ureter were normal.

**Requirements:** Give probable diagnosis or tell what other examination should be made, giving reasons. Suggest treatment.

### DECISIONS BASED ON FACTS

When confronted with two courses of action I jot down on a piece of paper all the arguments in favor of each one. Then, on the opposite side, I write the arguments against each one. By weighing the arguments pro and con and cancelling them out, one against the other, I take the course indicated by what remains.—BENJAMIN FRANKLIN.

# Clinical Notes



# and Abstracts

## Vitamin A in Measles (A Preliminary Clinical Note)

SINCE the mucous membrane of the eyes, nose, trachea, and upper respiratory tract is affected, especially in the prodromal stage of measles, I thought of the possibility of good results from the use of large doses of vitamin A in the prophylaxis and treatment of this disease.

I prescribed, routinely, in the prodromal stage of 10 cases of measles and as soon as the diagnosis was made, from 25,000 to 50,000 units of vitamin A concentrate in a soft gelatin capsule, to be given three times a day after meals, and find that the conjunctivitis and the coughing are reduced to a minimum, and the occasional complications of mastoiditis, otitis media, and pneumonia are avoided.

At the present time the series of cases treated is small, but further investigation work is being done, and a more detailed summary will be published shortly.

These findings suggest the importance of experimental study of this preparation for the prophylaxis and treatment of measles.

IRWIN I. LUBOWE, M. D.

New York City.

[At this time when measles is unusually prevalent all over the country, this brief note may prove to be especially important, as our readers will have an especially favorable opportunity to test Dr. Lubowe's suggestion and record the clinical results for publication.—Ed.]

## Death from Moles

ALL moles and pigmented areas that are exposed to trauma or irritation should be removed, since once a benign melanoma has become malignant, all measures to preserve life are too late.

These are early signs of malignant change: (1) Increasing elevation of the tumor; (2) increased pigmentation, especially if a bluish color appears; (3) appearance of small, pigmented, pin-point areas in the skin around the tumor; (4) a tendency to bleed; or (5) inflammation, especially ulcerative.

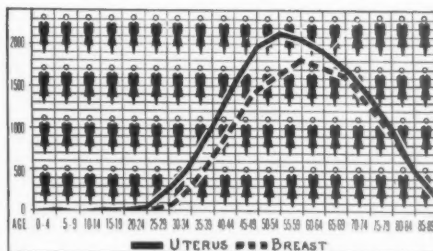
**Treatment:** The local anesthetic should be injected at some distance from the tumor, for trauma and incomplete excision are the commonest causes of malignant change. Two long sutures may be inserted, one or two inches above and below the tumor, and used to manipulate the tissue to be re-

moved, rather than chance dissemination of the tumor cells by manual pressure. The excision should be carried deeply, preferably to the fascia, because aberrant cells are found deeper in the subcutaneous tissue.—FREDERICK CHRISTOPHER, M.D., in "Minor Surgery" (W. B. Saunders Company, Philadelphia).

## Cancer of the Uterus and Breast

MORE than three out of every four of the 30,000 women who died last year from cancer of the uterus and of the breast, might have been saved by early diagnosis and prompt, proper treatment.

CHART I



While most of these cases occurred in women over forty, it will be noticed (see CHART I) that many younger women have been struck down by the disease. Cancer of the uterus, the chief cause of cancer deaths in women, is being cured in 80 percent of the cases when treated in its early stages. Cancer of the breast, second only to cancer of the uterus as a killer of women, is being cured in 75 percent of the early cases.—Bull. Am. Soc. for Control of Cancer.

## Postinfluenzal Psychoses

FOLLOWING an attack of influenza, easy fatigability, exhaustion, vasomotor and emotional instability, and psychic depression are common symptoms, their degree varying with the severity of the influenzal infection.

Patients without previous psychopathic taint recover from these symptoms, in time; but those with unstable personalities are apt to develop active and

continuing psychoses. This fact should always be kept in mind in these cases.

Patients showing this type of reaction must have *prolonged rest*, after the acute infection subsides, and are often benefited by restorative medication, particularly *thyroid preparations*\* in carefully regulated doses. Severe cases do better in special hospitals.

FRANK G. NORBURY, M.D., F.A.C.P.  
Jacksonville, Ill.

## New Things in 1940

As Reported in *Science News Letter*.

A **vanishing cream** that protects against poison ivy was developed.—July 20, page 35.

A **muscle-splicing operation**, in which bands of diseased tissue within the muscles were removed, was devised for rehabilitating useless muscles of infantile paralysis victims.—Nov. 16, page 308.

**Zinc peroxide treatment** was used successfully to relieve pain and clear up infected ulcers in hopeless cancer patients, enabling some of them to continue with needed irradiation treatment.—July 27, page 55.

A **world-wide influenza epidemic** was predicted by many authorities for 1940-1941 on the basis of 25-year pandemic cycles.—Oct. 12, page 238.

**Tonsillectomy** appeared to predispose to infantile paralysis, a survey showed.—Nov. 16, page 308.

**Promin**, a new sulfa drug, showed promise as a remedy for experimental tuberculosis in guinea pigs.—Nov. 30, page 344.

**Learning by organizing material** in close connection with the situation was demonstrated to be more efficient and subject to transfer than ordinary rote memorizing or verbal generalizing.—Oct. 5, page 217.

A **record of 401 operations** for relief of Meniere's disease with one death and 400 permanent cures was announced.—Nov. 2, page 276.

**Relief of Meniere's disease** by the chemical histamine in 49 patients was announced.—Nov. 2, page 276.

**Inhalations of 100% oxygen** were found to give relief from attacks of angina pectoris.—Nov. 9, page 293.

**Thiamin** was discovered to be an antidote for the depressing effects of tropical heat.—Nov. 23, page 323.

## Estrone in Ununited Fracture

**DURING** the laying season, when much calcium is required to make egg shells, the bones of the legs and wings of pigeons become soft and spongy, but this condition is relieved by giving female sex hormone. On this basis, Drs. R. G. Hills and J. A. Weinberg, of Johns Hopkins Hospital, tried giving estrone preparations to two women with ununited fractures, with good results. This treatment is not necessary in normally healing fractures, and has not yet been tried on men.—*Bull. Johns Hopkins Hosp.*, Apr., through *Time*, Apr. 14, 1941.

\*Adrenal cortex preparations are also helpful in many cases of this type.—Ed.

## Corns\*

A **CORN** is produced by a shoe that causes friction and pressure on the skin of a toe at a point where a bony prominence underlies the skin.

The simplest and best treatment is to wear shoes and stockings that fit properly. A painful corn on the dorsolateral side of the fifth toe is sometimes relieved by a small outer *sole wedge*. *Adhesive plaster pads*, worn directly over the corn, or commercial *ring pads* around it, relieve friction. A soft, phalangeal base corn may be relieved by a small *metatarsal pad* just behind the head of the affected toe. *Paring or shaving* of corns should be performed only by a skilled chiropodist.

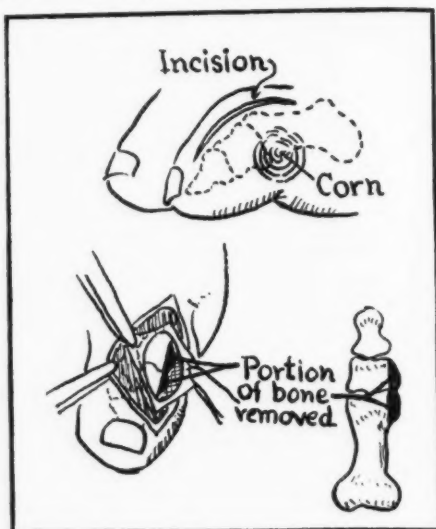


Fig. 1

If the patient is sufficiently eager to continue wearing tight shoes to undergo an operation, *exostectomy* may be performed, using a tourniquet around the base of the toe and nerve block with 1-percent procaine solution, by the technic shown in Fig. 1.

The operative field is prepared the night before, and at operation the ether-iodine preparation is used. It is unnecessary to curet or remove the corn. The patient is allowed to walk on the fourth or fifth day; stitches are removed on the tenth to fourteenth day.

ROBERT T. McELVENNY, M.D.  
Oak Park, Illinois

## Nembutal in Obstetrics

**PENTOBARBITAL Sodium (Nembutal)** was used in 36 deliveries (12 primiparas and 24 multiparas). It was not harmful to the fetuses during or after labor, nor to the mothers, in all of whom recovery was uneventful; analgesia was "fair" to "excellent" in 78 percent of the cases ("good" in 56 percent); there was no diminution of the active expulsive force.

\*A. J. of Surg., Dec., 1940.



ces, and no increase in the need for operative interference; one infant died from causes not attributable to the analgesic.

This drug can not be recommended for general use in these cases, except in hospitals with trained staffs, because of the restlessness it causes in some cases.—MOISES DIAZ, M.D., in *U.S.T.J. of Med.* (Manila, P. I.), Jan., 1941.

### Topagen in Whooping Cough

A WHOOPING cough vaccine that may be applied to the nose directly has been effective in the treatment of 275 cases of whooping cough. Topagen\* is dropped into the nose with a 0.25 cc. dropper, while the child's head is hanging over the side of a bed or table, with the nostrils pointing toward the ceiling. The medication must be kept in contact with the superior turbinate for from 3 to 5 minutes. This treatment is repeated each day, by a parent or nurse, until all symptoms have disappeared; improvement is usually noted in 5 days and a cure in 10 days.—I. S. BARKSDALE, M.D., in *South. Med. & Surg.*, Apr., 1941.

### After Treatment in Poliomyelitis

IT HAS long been thought that if a partially paralyzed muscle has had adequate rest, followed by bracing and physical therapy for 2 years or more, then all that could be done for that muscle had been done. No further increase in strength was to be expected; the muscle was considered useless; and operations were considered to replace the muscle.

We have examined, at the operating table, many of these muscles which had little or no function, while operating on adjoining structures. All of them showed areas of degeneration, usually fibro-fatty in character. The muscle contraction was ineffective because of the stretch that took place in the degenerated portion of the muscle. We now remove the fibrotic area and suture healthy muscle to healthy muscle, in those cases where marked atrophy has not taken place.—H. E. HIPPS, M.D., in *South. M. J.*, Feb., 1941.

[This is a highly important development, and those who are practically interested in cases of this type should study the original long and well illustrated article here abstracted for reference. The address of the *Southern Medical Journal* is Empire Bldg., Birmingham, Ala.—Ed.]

### Diaphragm and Jelly Contraception

A FOLLOW-UP questionnaire was sent to 647 patients (average age, 29½ years; average number of children, 3) of the Maternal Health Center of Syracuse, and replies were received from 376, or 58 percent of the total.

Of the patients responding, 92 percent claimed that they had complete confidence in the method prescribed and had continued its use since their initial visit to the clinic.

The occasional resort to other methods was reported by 32 patients. Most of these did so either because they were out of supplies or because, at

times, they found it inconvenient to use the diaphragm. The chief substitute methods were the condom and coitus interruptus. Discontinuance of the prescribed method and change to another was reported by 21 patients, the chief reasons being local irritation or inability to use the method properly. In 20 instances the husband objected to the diaphragm method, either on physical or emotional grounds.

A total of 43 pregnancies were reported by the patients. Fourteen of these were planned and 29 were accidental, the chief cause being non-use or irregular use of the prescribed method. Only four patients, or about 1 percent of the 376 replying, claimed to have failed with the method prescribed.—BERTHA C. BARTHOLOMEW, in *Human Fertility*, Dec., 1940.

### The Treatment of Burns\*

*First-aid treatment of burns: Morphine (within reasonable limits) will never kill a man in pain.* On many occasions, I have seen men arrive at the hospital, in excellent condition, twelve hours after being severely burned, and noted that they had received injections of morphine amounting to one (1) grain (64 mg.).

The tannic acid treatment is not effective in war burns where hospitalization can not be obtained for a number of hours, and should not be used on the hands or face. On fingers, the unyielding tannic acid coagulum causes edema, which seriously interferes with the circulation, and terminal gangrene of the phalanges may develop.

*First aid local treatment:* A jelly of gentian violet with Merthiolate is applied to the burned area without any cleansing. The application should be liberal, for it is painless and even soothing and will seal off the burned area preventing loss of plasma. The crust may remain in place until the patient arrives at the hospital.

*Hospital treatment:* Immediate shock is treated by the use of oxygen by a face mask and the intravenous administration of serum or plasma. After the shock has been treated, the patient is taken to a warm operating room, anesthetized with gas and oxygen, the whole burned area thoroughly cleansed with saline solution (using as rigid a technic as for an abdominal operation), and all blistered and dead epidermis is removed. The area is then dried with an electric hair drier and a solution containing gentian violet, 2 percent; brilliant green, 1 percent; and neutral acriflavine, 0.1 percent, is sprayed on and allowed to dry. A second application is then made and dried, the result being a thin supple tan which is adherent and sepsis-resistant. It becomes loosened about the eighth day and gradually falls away as healing takes place underneath. Electric burns or third degree burns will require skin grafting.

After the healing of a burn, it is essential that the healed surface, which is covered with new skin, should be treated with lanoline, rubbed into the area, each day for six weeks. This massage results in a more supple skin and one that is better supplied with blood.

*Systemic therapy:* Frequent hemoglobin estimations indicate the extent of hemoconcentration and its response to adrenal cortex injections, blood plasma or serum transfusions, and dextrose-saline solution. Fluids must not be "forced" as they

\*Manufactured by Mulford Biological Laboratories of Sharp and Dohme Co., Philadelphia.

\**Proc. Royal Soc. Med.*, Nov., 1940.

rapidly ooze out into the tissues and delay healing. A diet rich in meat and eggs, with added salt, is given to patients with granulating areas.

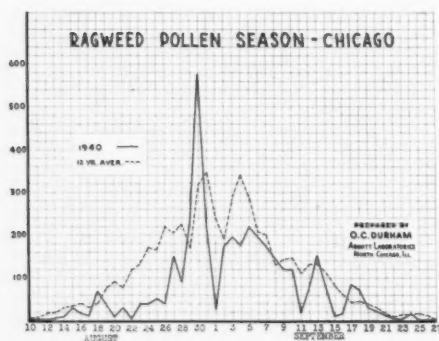
C. P. G. WAKELEY, M. D.

Surgeon, Rear-Admiral, British Navy.

I now use a simple coagulation method. One-percent crystal violet jelly\* is applied, followed by one application of 10-percent silver nitrate solution and a second application of crystal violet.

W. C. WILSON, M. D.

London, Eng.



### Pollen Counts and Hay Fever

AS AN indicator of what hay fever patients who are sensitive to ragweed may expect during the coming months, so that physicians can be prepared to meet the situation promptly, the accompanying graph of pollen counts in the Chicago area may be helpful, as the severity of the symptoms, in these cases, varies directly with the concentration of pollen in the air.—EDITOR.

### Indurative (Myalgic) Headache

THE headache of myalgia of the neck muscles may be confused with diseases of the sinuses, migraine, otitis, and mastoiditis. The muscles are tender to palpation; there may be spasm; and nodules are sometimes present. Persons obliged to hold their heads in a fixed position for long periods are more subject to this complaint; other environmental and occupational factors are also important. Exposure to cold and drafts increases or brings on the pain. *Treatment:* Massage and injection of one-percent procaine solution into the painful areas in the neck.—E. M. SEYDELL, M.D., in *Arch. Otolaryng.*, Nov., 1940.

["Rheumatic" or indurative headache was well known to the older generation of diagnosticians and practitioners. It can be readily diagnosed by

\*Made by the Calco Chemical Company, Bound Brook, N. J.

palpating over the back of the neck, especially toward the occiput, for tender areas. The diagnosis can be confirmed by using diathermy or infra-red rays over the neck; relief begins to appear within a few minutes after the application of heat. Daily heat treatments will relieve, or procaine solution may be injected, through a 25-gage needle, into the definitely tender areas. If more than two areas are markedly tender, or if the patient is hypersensitive, it is best to use heat.—Ed.]

### Pulmonary Embolism

PULMONARY embolism is often undiagnosed clinically. It should be suspected when one or more attacks of chest pain and blood streaked sputum occur. Etiologic factors are:

Heart disease	120
Carcinoma	16
Appendectomy	10
Pyelonephritis	7
Fracture reduction	7
Cholecystectomy	4

Two cases occurred after the simple (?) operation of ligating the saphenous vein for varicose veins.

Pulmonary embolism usually occurs on the tenth post-operative day. *Obese and older patients, who tend to lie motionless, are especially prone to emboli, and should be encouraged to move about in bed, to flex and extend the thighs, and to have light massage. A turn of 90 degrees every hour, alternating from side to back to opposite side, should be carried out.*—P. R. WESTDAHL, M. D., in *West. J. Surg., Ob. & Gyn.*, Feb., 1941.

### Treatment of Small Wounds

THE most important essential in the treatment of wounds is to obtain cleanliness. If the laceration is small, I give my patients a bar of Ivory soap, turn on the warm water faucet, and have them wash their hands for 10 minutes *by the clock* before any surgery is done. Thorough washing will prevent more infections and cause less chemical injury than any antiseptic. Don't forget to *splint* the hand or leg in a position of rest, to insure greater comfort for the patient and more rapid healing. A compression bandage prevents oozing. *Don't change the dressings daily;* unless suppuration follows, the clotted blood forms a perfect splint for the wound edges, and if torn off, healing is delayed and infection may enter. The overlying gauze may be removed and the wound palpated through one layer of gauze for tender or swollen areas.—L. F. BUSH, M.D., in *Penn. Med. J.*, Jan. 1941.

If a larger laceration is to be cleaned, place gauze soaked in 5-percent procaine solution in the wound, to permit painless suturing.—L. K. FERGUSON, M.D., in *Penn. Med. J.*, Jan., 1941.

[Painful and inefficient dressings may be avoided by the use of cellophane to cover the wound, or by wide-mesh, paraffined gauze (made by Abbott Laboratories), or by Cilkoid perforated, transparent dressings, which permit the wound to be inspected and palpated without contamination.—Ed.]



# Thumbnail Therapeutics



## Benzedrine Sulfate in Acute Alcoholism

● We have been impressed repeatedly with the effectiveness of amphetamine (Benzedrine) sulfate in the acute phases of alcoholic intoxication. Frequently, boisterous, excited, hyperactive, surly, and irritable individuals are quieted by the drug; a few fall asleep after the medication. Beginning tremor in these patients is aborted. Occasionally, however, the drug appears to increase the excitement or the tremulousness. The incoherence and incoordination characteristic of the more profound stages of inebriation is replaced rapidly by a more sober coordinate state. Persons who have imbibed sufficiently to become stuporous have been aroused within 30 minutes following the intravenous injection of 20 to 30 mg. of amphetamine sulfate. Disturbing after-effects can be dissipated quickly, within a few hours, by oral doses of from 10 to 20 mg. of the drug.—DRS. E. C. REIFENSTEIN, JR., AND E. DAVIDOFF, in *N.Y.St. J. of M.*, Feb., 1940.

## Varicose Ulcers

● Apply sulfanilamide powder directly to the ulcerated area, and over this an Unna boot. This generally relieves pain promptly and hastens healing, after which the necessary ligations and sclerosing injections may be carried out.—HOWARD C. REES, M.D., in *J. Mich. St. M. S.*, Dec., 1940.

## Vitamin B in Multiple Sclerosis

● Nicotinic acid, in sufficiently large doses, produces intense flushing of the skin and dilatation of the vessels of the pia mater.

Five (5) cases of long-standing multiple sclerosis, which had proved refractory to conventional treatment, were given nicotinic acid and vitamin B<sub>1</sub> by intramuscular injection, using 10 cc. of a solution containing 12 mg. of nicotinic acid and 3.32 mg. of vitamin B<sub>1</sub> in each cc. The solution was warmed to 110°F. before injection, since the flushing reaction seemed to be promoted by this warming. The injections were given 2 or 3 times weekly. Though no complete remissions were obtained, all the patients showed definite improvement in symptoms.—M. T. MOORE, M. D., in *Arch. Int. Med.*, Jan., 1940.

## Brewer's Yeast

● In the treatment of vitamin B deficiency, brewer's yeast tablets are more effective than thiamin (vitamin B<sub>1</sub>), nicotinic acid, and riboflavin combined.—K. O. ELSOM, M.D., in *Penn. Med. J.*, Mar., 1941.

## Nicotinic Acid in Stomatitis

● Many patients with infectious diseases, such as pneumonia, erysipelas, osteomyelitis, or any severe sepsis, may develop a rough, red tongue; occasionally, glossitis is present and the tongue is bright-red and smooth. Anorexia, nausea, vomiting, and a heavily coated tongue may appear. These symptoms are relieved by the intravenous or intramuscular administration of nicotinic acid, in the form of sodium nicotinate. A ten-percent solution may be given intramuscularly, in doses of 100 mg. of nicotinic acid or 125 mg. of sodium nicotinate.—V. P. SYDENSTRICKER, M.D., in *Ann. Int. Med.*, Mar., 1941.

## Treatment of Human Bites

● The first physician to see a patient with a human bite should, under aseptic conditions, excise the wound edges and all macerated tissue, and thoroughly cleanse the wound. The wound is left open and packed with zinc peroxide, or continuous hot, wet dressings are used. If not treated by radical excision or if suturing is attempted, a severe infection and local gangrene may follow.—L. F. BUSH, M.D., in *Penn. Med. J.*, Jan., 1941.

## Preoperative Medication

● Depressant drugs, such as opiates and barbiturates, should be carefully regulated to prevent the appearance of respiratory depression during inhalation anesthesia.

Barbiturates should be given from 2 to 4 hours before operation, depending upon the rapidity and length of action of the particular drug (Nembutal, Amytal, Seconal, pentobarbital sodium, etc.). Opiates should be given from 1 to 1½ hours before anesthesia is to be begun.—I. B. TAYLOR, M.D., in *Penn. Med. J.*, Jan., 1941.

## Testosterone in Dysmenorrhea

● Testosterone, in doses of from 10 to 25 mg. two or three times weekly, may be given during the menstrual cycle in cases of dysmenorrhea. Results are very good.—E. NOVAK, M.D., in *South. Med. & Surg.*, Apr., 1940.

## Postoperative Smoking

● More men suffer postoperative atelectases of the lungs than do women, although many more women are operated upon. Permitting these men to smoke just enough to provoke a cough reflex sufficient to promote evacuation of the accumulated mucus is a good idea. Perhaps we have been doing harm by forbidding postoperative smoking.—M. VIGLIONE, M.D., in *Hahneman. Mon.*, Mar., 1941.



## THE DOCTOR'S STUDY

*Clothes are ephemeral things, but good books are worn for a whole lifetime.*—BEN ABRAMSON.

### Proctology

Bacon

**ANUS, RECTUM, SIGMOID COLON:** Diagnosis and Treatment. By HARRY E. BACON, B.S., M.D., F.A.C.S., F.A.P.S., *Clinical Professor of Proctology, Temple University School of Medicine, et cetera.* Introduction by W. WAYNE BARCOCK, A.M., M.D., *Professor of Surgery, Temple University School of Medicine, Second Edition.* 507 Illustrations. Philadelphia, Montreal, London: J. B. Lippincott Company, 1941. Price, \$8.50.

THIS is the best illustrated text on proctology we have yet seen. William Brown McNett's illustrations are so lifelike that one can see the actual operative steps and look at pathologic conditions as well as if one were at the operating table or in the examining room.

This is the first proctologic work to illustrate various conditions as viewed through the proctoscope and sigmoidoscope. Other proctologists have chided the general practitioner for failing to use the sigmoidoscope, yet never made any attempt to impart any information or pictures so that he could recognize abnormal conditions.

Bacon gives several methods of treatment for each condition considered, and his comments are practical.

### Applied Physiology

Wright

**APPLIED PHYSIOLOGY.** By SAMSON WRIGHT, M.D., F.R.C.P., *Professor of Physiology, University of London; Middlesex Hospital Medical School; Examiner in Physiology to the University of Leeds. Seventh Edition.* New York: Oxford University Press, 1940. Price, \$7.00.

FOR 15 years, the author has been carrying on the Samsonesque task of bridging the gap between the physiology laboratory and the sick patient in a bed. Six previous editions have been well received, and the seventh, written under the stress of war, is larger and wonderfully complete.

This is no slim monograph for those dilettantes who wish to idly leaf through a condensation. It is a combination of basic physiologic data and clinical concepts of disease, and is remarkably well illustrated.

This intermingling of clinic and laboratory is well shown by the contents of each chapter. Under cerebrospinal fluid for example, one finds anatomy, composition, ventriculography, formation of cerebrospinal fluid, flow, absorption, relation to nerve centers, cerebral tumor, hydrocephalus, injection of saline solutions, clinical use of hypertonic saline and concentrated plasma, functions, loculation syndrome, lumbar puncture, pathology of fluid, summary of changes in disease, and the colloidal benzoin reaction.

The ductless glands, the blood, the heart and circulation (the discussion on dyspnea is worthwhile), respiration, digestion, metabolism, and secretion of urine are considered in separate sections.

## New Books

Any book reviewed in these columns will be procured for our readers if the order, addressed to **CLINICAL MEDICINE**, Waukegan, Ill., is accompanied by a check for the published price of the book.

### Hemorrhagic Diseases

Nygaard

**HEMORRHAGIC DISEASES:** Photoelectric Study of Blood Coagulability. By KAARE K. NYGAARD, M.D., *Former Fellow in Surgery, the Mayo Foundation; Former Assistant Surgeon, the University Clinic, Oslo; Fellow of the Alexander Maltbe Foundation for Research in Medicine, Surgery and Gynecology. Illustrated.* St. Louis: The C. V. Mosby Company, 1941. Price, \$5.50.

THE author modestly disclaims any great knowledge of the difficult subject that he has chosen, but nowhere can the physician and surgeon find more pertinent condensations of all the experimental and clinical study that has been done along this line.

The first two sections discuss the previous work and the author's experimental investigations into the problem of coagulation of blood. The precise measurement of blood clotting with the photoelectric cell may mean that the coagulograph may be as widely used as the electrocardiograph, which it resembles in some respects. The blood clotting process is indicated on a film in the form of a curve ("coagulogram"), which varies with the speed of coagulation.

Section three presents a discussion of the hemorrhagic diseases and a new classification. The clinical problems of management, the newer knowledge that must be kept in mind, and illustrative case histories make this section a fascinating one for the man who must care for such bleeding patients, operate on jaundiced ones, or treat babies with hemorrhagic disease.

### Clinical Neurology

Nielsen

**A TEXTBOOK OF CLINICAL NEUROLOGY.** By J. M. NIELSEN, M.D., F.A.C.P., *Associate Clinical Professor of Medicine, University of Southern California, New York and London: Paul B. Hoeber, Inc., Medical Book Department of Harper and Brothers, 1941. Price, \$6.50.*

THIS is designed as a practical guidebook. The anatomy and physiology of the nervous system are not treated in separate chapters, but are brought into the clinical discussions, to illustrate the necessity for and use of their facts in making a diagnosis or instituting treatment.

New treatments, including the most recent ones with sulfonamide drugs and vitamins, are specifically presented, and all recommendations are based on extensive clinical experience. The ayitamineses, cerebral localization, sciatic and related pains, and the intracranial complications of otitis media are discussed in detail.

Not the least interesting section presents that old hugaboo, low back pain, with suggestions for diagnosis. The author firmly believes that the sacro-iliac joint can be subluxated, with resultant severe pain, and that this pain can be relieved by reversing the direction of the causative twist or injury.